********************* (MM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Sat May 13 08:59:53 2000; MasPar time 4.30 Seconds 302.703 Million cell updates/sec

Tabular output not generated.

Description:
Perfect Score:
Sequence: >US-09-331-631-24
(31-85) from US09331631.pep
425
1 DEDDRRGGHSLQQCVQRCRQ......DDQQQHGRHEQEEEQGRGRG 55

Scoring table: PAM 150 Gap 11

Searched: 188963 seqs, 23686106 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database: a-geneseq35 1:geneseqp

Statistics: Mean 23.878; Variance 101.499; scale 0.235

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| 22 23 | 20 21 | 17 18 | 15 16 | 13 | 10 | ဖြစ | 76 | 4. 10 | ων | 1 | Result |
|------------------------|---|---|--|------------------|--|--|--|--|--|------------------------|----------------|
| 80 | 889 | 2000 444 | 844 | 2 8 0 7 4 4 | 8 8 | 955 | 105 105 | 129 129 | 174 131 | 425 | Score |
| | 900 | | 19.8 | 19.8 | 20.9 | | 24.7 24.7 | 30.4 30.4 | 40.9 30.8 | 100.0 | Query Match |
| 539 374 | 1829 | 782 1255 | 524 624 | 450 97 | 566 566 | 409 489 | 625 898 | 666 666 | 593 | 637 | Length |
| יום | | بر بر ب | <u> </u> | سر سر د | | | $\mu\mu$ | | ىر بر | ь ; | DB |
| W33628 W97834 | W22150 Y07242 | W19764 W92406 W01111 | W90339 R08222 | W46606 W59348 | W62831 R20181 | W90342 W90341 | W62830 W31853 | W62828 W62829 | W62835 W62832 | W62837 | ID |
| transcrip Fc recept | Peanut allergen Ara hI Actin-filament binding | Her2-GM-CSF immunostim Human HER-2/neu oncoge HFR-2/neu protein | G. max SBP1 protein. Extracellular portion | man ErbB2 extr | Theobroma cacao antimi Sequence encoded by 67 | G. max truncated SBP2 G. max SBP2 protein. | Macadamia integrifolia Mycobacterium tubercul | Macadamia integrifolia Macadamia integrifolia | Zea mays antimicrobial Gossypium hirsutum ant | Hordeum vulgare antimi | Description |
| 1.39e+01 2.00e+01 | | 9.64e+00 9.64e+00 | | 9.64e+00 | | 1.24e+00 1.24e+00 | 1.83e-01 1.83e-01 | 1.61e-03 1.61e-03 | 1.55e-07 1.08e-03 | 2.03e-31 | Pred. No. |

| 45 | 44 | 4 3 | 42 | 41 | 40 | 39 | ა 8 | 37 | 36 | 35 | 34 | ω ω | 32 | <u>3</u> 1 | 30 | 29 | 28 | 27 | 26 | 25 | 24 |
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| 72 | 72 | 73 | 73 | 73 | 73 | 74 | 74 | 74 | 74 | 74 | 75 | 76 | 76 | 76 | 76 | 76 | 76 | 77 | 77 | 77 | 77 |
| | 16.9 | | | | 17.2 | | | 17.4 | 17.4 | 17.4 | | | | 17.9 | | | | 18.1 | | 18.1 | 18.1 |
| 340 | 76 | 1529 | 712 | 404 | 193 | 802 | 787 | 783 | 709 | 541 | 288 | 554 | 529 | 509 | 451 | 405 | 150 | 1433 | 1382 | 614 | 614 |
| بر | Ц | Н | Н | ш | Н | Н | Н | ب | <u></u> | L | <u>س</u> | _ | _ | <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u> | L | _ | -ب | Н | Н | щ | ب |
| W81594 | R22394 | R97985 | W30749 | R27284 | W30750 | W37153 | W37152 | W37151 | P91934 | W37148 | W41574 | R05271 | R38209 | R38210 | R27721 | W33737 | P70058 | R39568 | W31867 | W62834 | W22149 |
| Protein encoded by hum | Antigen tc-10a. | CORK potassium channel | Rat YT521 gene product | Sequence encoded by th | Partial human YT521 ge | Mouse neural Mena+++ p | | Mouse neural Mena+ pro | Bl antigen. | Mammalian Ena (Mena). | Human cardiac troponin | Amino acid sequence of | LD1D2D3.ApaL EGF recep | LD2D3D4 EGF receptor t | Mouse perforin C-termi | Epidermal growth facto | Human epidermal growth | Sequence of c-erbB-2 t | Human metastasis-assoc | Arachis hypogaea antim | Peanut allergen Ara hI |
| 8.32e+01 | 8.32e+01 | | 6.98e+01 | | 6.98e+01 | 5.85e+01 | | 5.85e+01 | 5.85e+01 | 5.85e+01 | 4.90e+01 | 4.10e+01 | 4.10e+01 | 4.10e+01 | 4.10e+01 | 4.10e+01 | 4.10e+01 | 3.43e+01 | 3.43e+01 | 3.43e+01 | 3.43e+01 |

ALIGNMENTS

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22-DEC-1997; AU0874.
20-DEC-1996; AU-004275.
(RETR-) COOP RES CENT TR
Bower NI, Goulter KC, Gr
WPI; 98-377279/32.
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27-OCT-1998 (first entry)
Macadamia integrifolia ant
                                       Novel anti-microbial protein from e.g. Macadamia integruseful for controlling microbial infestations of plants Claim 1; Page 34-36; 96pp; English.
The sequence is that of an antimicrobial protein which be used to control microbial infestations in plants and
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The sequence is that of an antimicrobial protein which be used to control microbial infestations in plants and
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22-DEC-1997; AU0874.

20-DEC-1996; AU-004275.

20-DEC-1996; AU-004275.

(RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.

BOWER NI, Goulter KC, Green JL, Manners JM, Marcus JP, WPI; 98-377279/32.
  Sequence
                           animals.
                                                                                                                                                             N-PSDB; V42310.
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No. 1 08e-03;
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                                                                                                                                      be used animals.
                        useful for controlling microbial in Claim 1; Page' 43-45; 96pp; English.
The sequence is that of an antimicrobe used to control microbial infest
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useful for controlling microbial infestat
Claim 1, Page 39-41; 96pp; English.
The sequence is that of an antimicrobial
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ilarity 34.5%;
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29. .666
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Pred. No. 1.
14; Mismatc
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Pred. No. 1.61e-03
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L.61e-03;
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New modified plant sucrose binding proteins - used to develop transgenic plants which can have enhanced or decreased sucrose uptake activity in developing seeds claim 7; Page 39-40; 58pp; English.
This sequence represents a novel sucrose binding protein, SBP2 isolated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New DNA and related proteins or RNA derived from M. tuberculosis - used for diagnosis of mycobacterial infections, monitoring vaccination and development of anti-mycobacterial agents Claim 7; Fig 14; 55pp; English.

This novel 77 kDa protein is encoded by an open reading frame of a Mycobacterium tuberulosis DNA fragment (see T93610) containing polymorphic GC-rich sequences. Tt is highly enriched in glycine and may be a cell wall protein. Novel M. tuberculosis proteins (see W31851-57) are claimed. These can be produced as recombinant proteins, especially in bacterial, yeast, fungal or higher and may be a cell wall protein.
                                                                                                                                                                                                                             26-NOV-1998.
21-MAY-1998; U10465.
22-MAY-1997; US-047568.
(UNIW ) UNIV WASHINGTON STATE RES FOUND.
Chao WS, Grimes HD;
WPI; 99-070155/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proteins, especially in bacterial, yeast, fungal or higher eukaryote host cells, and used for diagnosing tuberculosis and other mycobacterial infections in humans or animals. The claimed proteins can also be used for epidemiological studies, for monitoring vaccination, and for the development of vaccines and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-NOV-1997.
10-APR-1997; E01973.
29-APR-1996; DE-017184.
(GBFB ) GBF GES BIOTECH FORSCHUNG GMBH.
ESPITIA C, Honisch C, Moreno C, Singh Nepri; 97-549750/50.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 max truncated SBP2 protein.
Pl; sucrose binding protein; SBP2; sucrose uptake; transgenic plant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       carbohydrate
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12; Conservative
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Pred. No. 1.
16; Mismatc
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Pred. No. 1.83e-01;
15; Mismatches 10
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1.83e-01;
hes 12;
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I transgenic plants which can have enhanced or decreased sucrose
I uptake activity in developing seeds
I uptake activity in developing seeds
I claim 13b; page 37-38; 58pp; English.

This sequence represents a novel sucrose binding protein, SBP2 isolated
I find Glycine max. This protein is used in a method resulting in the
I production of a modified plant sucrose binding protein (SBP) which has a
I modified amino acid sequence compared to a corresponding wild-type SBP,
I and where expression of the modified SBP in a yeast assay system confers
I hanced sucrose uptake compared to the corresponding wild-type SBP,
I he products of the invention can be used for producing transgenic plants
Which have modified sucrose uptake activity in developing seeds may be
I seeds. Enhanced sucrose uptake activity in developing seeds may be
desirable where it is an advantage to increase the carbohydrate content
I the seed (e.g. where the seed is the primary plant material harvested,
I such as soybean). In contrast, decreased sucrose uptake activity in
                             Query Match
Best Local
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                                                                                                                                                                                                        such as soybean). In contrast, decreased sucrose uptake activity in seeds might be desirable where the vegetative material of the plant is harvested. The SBP regulatory regions confer specific or enhanced expression in developing seeds and so may be used to express any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UNIW ) UNIV WASHINGTON Chao WS, Grimes HD; WPI; 99-070155/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SBP1; sucrose binding protein; SBP2; sucrose uptake; transgenic seed; carbohydrate content; soybean.
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                                                                                                                                         sequence
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21-MAY-1998; U10465
                                                                                                                                                                              transgene
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                                 Similarity
                                                                                                                                                                       in developing
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Pred. No. 1.24e+00,
11; Mismatches 1;
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                             No.
                             DB 1; L
1.24e+00;
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Matches

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07-JUN-1991; G00914.
11-JUN-1990; GB-013016.
(MRSC) MARS UK LTD.
Spencer ME, Hodge R, Deakin E)
WPI; 92-024418/03.
                                                                                                                                                                                  expression vectors

Claim 4: Fig 2: 59pp; English.

Claim 4: Fig 2: 59pp; English.

The inventors claim a 67 kD and 31 kD T. cacao protein, and fragments, and encoding DNAs. The 47 kD and 31 kD proteins are derived from the 67 kD precursor. T. cacao protein cDNA was detected in a cDNA library prepared from immature cocoa beans RNA using a probe based on the AA sequence of a CNBT peptide common to the 47 kD and 31 kD polypeptides. Homology searches revealed close the 47 kD and 31 kD polypeptides and the vicilins, which are
            W46606 stand
W46606;
30-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W62831 stand
W62831;
27-OCT-1998
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02-DEC-1997: AU0874.
20-DEC-1996: AU-004275.
20-DEC-1996: AU-004275.
(RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY Bower NI, Goulter KC, Green JL, Manners JM, Manwers MPI; 98-377279/32.
  Tyrosine
                                                                                                                                                                                                                                                                                                                  Recombinant cocoa proteins -
beans and produced in large of
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                                                                                                                                                                                                                                                                                                                                                                                                                                         Theobroma cacao.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             animals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel anti-microbial protein from e.g. Macadamia integruseful for controlling microbial infestations of plants Claim 1, Page 47-49, 96pp; English.
The sequence is that of an antimicrobial protein which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27-0CT-1998 (first entry)
Theobroma cacao antimicrobial protein.
antimicrobial protein; infestation; control
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        86 QQCQGRCQEQQQGQREQQQCQRKCWEQYKEQERGEHEN 123
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                                                                                                          QQCQGRCQEQQQGQREQQQCQRKCWEQYKEQERGEHEN 123
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                                     standard;
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  kinase
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llarity 28.9%;
Conservative
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  irst entry)
                                     Protein;
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quantities using

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d storage protein.
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No. 3.82e+00;
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3.82e+00;
3.82 12;
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                                                                                                                                    12;
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yeast and bacterial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     plants
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plants or man
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Matches 1
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30-APR-1998.
09-OCT-1996; US-731794.
18-OCT-1996; US-731794.
(GETH ) GENENTECH INC.
(TEXA) UNIV TEXAS SYSTEM.
Fendly BM, Phillips GD, Scheuermann RH, Uhr JW;
WPI; 98-261493/23.
New anti-ErbB2 antibodies '- which induce apoptosis in cells which induce apoptosis of inflammatory,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         treatment of TKA-1 related diseases
(Claim 2; Fig 1; 61pp; English.
The Tyrosine kinase associated protein-1 (TKA-1) contains a stretch
of 106 amino acids (aa7-112) which is duplicated within the
sequence (aa 146-252) with 65% identity, and again (aa346-176) with
47% identity. A binding agent of TKA-1, able to bind to a TKA-1
polypeptide, or the full length TKA-1 protein can both be used in a
method for disrupting or promoting receptor dimerisation. They can
also be used to identify agents capable of interfering with the
interaction between them. The TKA-1 antibody can be used for the
detection of TKA-1. The TKA-1 protein, antibody and binding agent can
all be used in the diagnosis and treatment of TKA-1 related diseases an
        angiogenic or, immunologic disorders Disclosure; Page 46; 72pp; English. This sequence represent
                                                                                                                                                                                                          08-SEP-1998 (first entry)
Human ErbB2 extracellular domain protein fragment (aa 529-625).
ErbB2; epitope; monoclonal antibody; identification; apoptosis; detection; treatment; disorder; tumour; benign; malignant; leuk.
lymphoid malignancy; inflammation; angiogenic; immunological.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (PLAC ) Seedorf
                                                                                                                                                                                   Homo sapiens.
WO9817797-A1.
This sequence represents a fragment of the human domain corresponding to amino acids 529-625 which
                                                                                                                                                                                                                                                                                                   W59348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 98-101049/09
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13-JUN-1996; US-666067.
13-JUN-1996; US-665037.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         detection; binding agent; receptor dimerisation.
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les 13; Consei
                                                                                                                                                                                                                                                                                                                                                       RQERPRYSHARCVQEC-RDDQQQHGRH-EQEEEQGRGRG
                                                                                                                                                                                                                                                                                                standard;
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L, Ullrich A;
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larity 33.3%;
Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= " GLGF domain
                                                                                                                                                                                                                                                                                                protein;
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. 8.02e+00;
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 450
             ErbB2 extracellular
is capable of binding
                                                                     cells which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     346-376"
                                                                                                                                                                                                                             leukaemia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PT New modified plant sucrose binding proteins - used to develop
PT transgenic plants which can have enhanced or decreased sucrose
PT uptake activity in developing seeds
Claim 7; Page 36-37; SSpp; English.

CC This sequence represents a novel sucrose binding protein, SBP1 isolated
CC from Glyvine max. This protein is used in a method resulting in the
CC production of a modified plant sucrose binding protein (SBP) which has a
CC modified amino acid sequence compared to a corresponding wild-type SBP,
CC and where expression of the modified SBP in a yeast assay system confers
CC enhanced sucrose uptake compared to the corresponding wild-type SBP.
CC The products of the invention can be used for producing transgenic plants
CC which have modified sucrose uptake activity in developing seeds may be
CC desirable where it is an advantage to increase the carbohydrate content
CC such as soybean). In contrast, decreased sucrose uptake activity in
CC seeds might be desirable where the vegetative material of the plant is
CC carboned in developing seeds and so may be used to express any
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
LT 15
W90339 standard; protein; 524
W90339;
24-MAY-1999 (first entry)
G. max SBP1 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-NOV-1998.
21-MAY-1998; U10465.
22-MAY-1997; US-047568.
(UNIW ) UNIV WASHINGTON STATE RES FOUND.
Chao WS, Grimes HD;
WPI; 99-070155/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G. max truncated SBP1 protein.
SBP1; sucrose binding protein; SBP2; sucrose uptake; transgenic plant; seed; carbohydrate content; soybean.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        monoclonal antibodies 4D5. This region is used in a method which identifies antibodies capable of binding to ErbB2 and induce apoptosis of a cell which overexpresses ErbB2. The antibodies can also be used to detect ErbB2 on a cell. The antibodies can be used for treating disorders such as benign or malignant tumours, (e.g. renal, liver, kidney, bladder, breast, gastric, ovarian, colorectal, prostate, pancreatic, lung, vulval, thyroid, hepatic carcinomas, sarcomas, glibalastomas, and various head and neck tumours), leukemia's and lymphoid malignancies, other disorders such as neuronal, glial, astrocytal, hypothalamic and other glandular, macrophagal, epithelial, stromal and blastocelic disorders, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T 14
W90340 standard; protein; 444 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  transgene in developing seeds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9853086-A1.
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Sequence 97 AA;
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                                                                                                                                                                                                                                                                                    41 LQQCVQRCRQERPRYSHA--R-CVQEC-RDDQQQHGRHEQEEEQGRGR 84
                                                                                                                                                                                                                                                                                                                                                             40 LVTCKHQCQQQQ-QYTEGDKRVCLQSCDRYHRMKQEREKQIQEETREK 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42 QQCVQRCR--QERPR-YSHAR-CVQECRDD-QQQHG 72
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ilarity 44.4%;
Conservative
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Pred. No. 9.64e+00;
14; Mismatches 15
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Pred. No. 9.64e+00;
7; Mismatches 7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 444;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-NOV-1998.
21-MAY-1998; U10465.
22-MAY-1997; US-047568.
(UNIW ) UNIV WASHINGTON STATE RES FOUND Chao WS, Grimes HD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence represents a novel sucrose binding protein, SBP1 isolated from Glycine max. This protein is used in a method resulting in the production of a modified plant sucrose binding protein (SBP) which has a modified amino acid sequence compared to a corresponding wild-type SBP, and where expression of the modified SBP in a yeast assay system confers enhanced sucrose uptake compared to the corresponding wild-type SBP. The products of the invention can be used for producing transgenic plants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New modified plant sucrose binding proteins - used to develop transgenic plants which can have enhanced or decreased sucrose uptake activity in developing seeds Disclosure; Page 34-36; 58pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Glycine max.
WO9853086-A1.
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41 LQQCVQRCRQERPRYSHA--R-CVQEC-RDDQQQHGRHEQEEEQGRGR 84
                                                             40 LVTCKHQCQQQQ-QYTEGDKRVCLQSCDRYHRMKQEREKQIQEETREK 86
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                                                                                                                                 14;
                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                    in developing seeds.
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llarity 29.2%;
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